Contents Volume 61 1999

Volume 61 No. 1 July 1999

Regular papers

Identification of surface exposed amino acids of isolated and membrane-bound CF1 by protease accessibility
A.N. Malyan, O.I. Vitseva, H. Strotmann **1–9**

Structural predictions on the 33 kDa extrinsic protein associated to the oxygen evolving complex of photosynthetic organisms
J. De Las Rivas, P. Heredia **11–21**

Why do chlorosomal chlorophylls lack the C13^2-methoxycarbonyl moiety? An *in vitro* model study
T. Oba, H. Tamiaki **23–31**

Modification of electron transfer from the quinone electron carrier, A_1, of Photosystem 1 in a site directed mutant D576⇒L within the Fe-S_x binding site of PsaA and in second site suppressors of the mutation in *Chlamydomonas reinhardtii*
M.C.W. Evans, S. Purton, V. Patel, D. Wright, P. Heathcote, S.E.J. Rigby **33–42**

Isolation of state transition mutants of *Chlamydomonas reinhardtii* by fluorescence video imaging
O. Kruse, P.J. Nixon, G.H. Schmid, C.W. Mullineaux **43–51**

Spectral resolution of low-energy chlorophylls in Photosystem I of *Synechocystis* sp. PCC 6803 through direct excitation
E.M. Gill, B.P. Wittmershaus **53–64**

Effects of growth-light quantity, growth-light quality and CO_2 concentration on Rubisco deactivation during low PFD or darkness
J. Ernstsen, I.E. Woodrow, K.A. Mott **65–75**

Structural and functional heterogeneity in the major light-harvesting complexes of higher plants
R.G. Walters, P. Horton **77–89**

Historical corner

Memoir of a 1949 railway journey with photosynthetic bacteria
H. Gest **91–96**

Book review **97–98**

CONTENTS Volume 61 No. 2 August 1999

Minireview

Malate metabolism by NADP-malic enzyme in plant defense
P. Casati, M.F. Drincovich, G.E. Edwards, C.S. Andreo **99–105**

Review/Hypothesis

A comparative analysis of the spin state distribution of *in vitro* and *in vivo* mutants of PsaC. A biochemical argument for the sequence of electron transfer in Photosystem I as $F_X \rightarrow F_A \rightarrow F_B \rightarrow$ ferredoxin/flavodoxin
J.H. Golbeck **107–144**

Regular papers

Correlations between chlorophyll fluorescence quenching parameters and photosynthesis in a segregating *Lycopersicon esculentum* × *L. peruvianum* population as measured under constant conditions
P. Linger, W. Brüggemann **145–156**

Characterisation of hydrophobic peptides by RP-HPLC from different spectral forms of LH2 isolated from *Rps. palustris*
H.A. Tharia, T.D. Nightingale, M.Z. Papiz, A.M. Lawless **157–167**

The role of ApcD and ApcF in energy transfer from phycobilisomes to PS I and PS II in a cyanobacterium
M.K. Ashby, C.W. Mullineaux **169–179**

Application of near-field scanning optical microscopy in photosynthesis research
V.P. Shinkarev, R. Brunner, C.A. Wraight **181–191**

Volume 61 No. 3 September 1999

Obituary

Therese Marie Cotton-Uphaus (1939–1998)
M. Seibert, M. Thurnauer **193–196**

Minireview

Assembly of light-harvesting complex II and biogenesis of thylakoid membranes in chloroplasts
J.K. Hoober, L.L. Eggink **197–215**

Regular papers

Release and aggregation of the light-harvesting complex in intact leaves subjected to strong CO_2 deficit
P. Šiffel, Z. Braunová **217–226**

Homeostatic regulation upon changes of enzyme activities in the Calvin cycle as an example for general mechanisms of flux control. What can we expect from transgenic plants?
L.E. Fridlyand, J.E. Backhausen, R. Scheibe **227–239**

Molecular rearrangements of thylakoids after heavy metal poisoning, as seen by Fourier transform infrared (FTIR) and electron spin resonance (ESR) spectroscopy
B. Szalontai, L.I. Horváth, M. Debreczeny, M. Droppa, G. Horváth **241–252**

Laser-flash absorption spectroscopy study of the competition between ferredoxin and flavodoxin photoreduction by Photosystem I in *Synechococcus* sp. PCC 7002: Evidence for a strong preference for ferredoxin
K. Meimberg, U. Mühlenhoff **253–267**

Light-induced increase in initial chlorophyll fluorescence F_o level and the reversible inactivation of PS II reaction centers in soybean leaves
S.-S. Hong, D.-Q. Xu **269–280**

Isolation and characterization of chloroplast Photosystem II antenna of spinach by reversed-phase liquid chromatography
L. Zolla, A.M. Timperio, M.G. Testi, M. Bianchetti, R. Bassi, F. Manera, D. Corradini **281–290**

Energy exchange between the chlorophyll antennae of monomeric subunits within the Photosystem I trimeric complex of the cyanobacterium *Spirulina*
N.V. Karapetyan, V.V. Shubin, R.J. Strasser **291–301**

Erratum: Volume 60: 75–86, 1999 **303–316**

Contents Volume 61 **317–319**

Author index Volume 61 **321**